

3. Evelyn

Program Name: Evelyn.java

Input File: evelyn.dat

Evelyn has invented a new base 10 system. This system behaves very similarly to the existing base 10 system we use today, but some of the symbols look a little different.

```
& add & is &
& add ' is '
& add ( is (

' add ' is (
' add ( is )
' add ) is *
' add * is +
' add + is ,
' add , is -
' add - is .
' add . is /

' add / is '&

/ add / is ' .
* add + is ' '
```

The term **add** is defined as the classical form of addition and **is** indicates equality. Using this new base representation, given a depth n , the Fibonacci sequence is defined as:

```
f(0) is '
f(1) is '
f(n) is f(n-1) add f(n-2)
```

Evelyn has asked you to display the n th encrypted Fibonacci value, preceded by all other values in the sequence, separated by single spaces.

Input: One integer, n , the depth of the Fibonacci value to be displayed.

Output: The Fibonacci value of depth n in Evelyn's base representation, preceded by all previous values in the sequence.

Sample Input:

```
1
2
10
```

Sample Output:

```
' '
' ' (
' ' ( ) + . ' ) ( ' ) * ++ ./
```